

IN THE CLAIMS

Please amend the claims as follows:

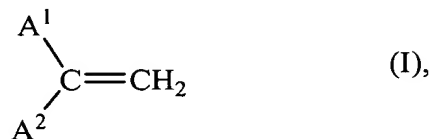
Claim 1 (Currently Amended): A process comprising:
dimerizing an olefin mixture to form a dimerized product, and
derivatizing the dimerized product to form a mixture of ~~for the preparation of~~
~~surfactant alcohols which have particularly advantageous properties with regard to~~
~~ecotoxicity and biodegradability and of corresponding surfactant alcohol ethers by~~
a) ~~dimerization of olefin mixtures,~~
b) ~~derivation to give primary alcohols, and~~
c) ~~optional subsequent alkoxylation,~~
~~which comprises using an~~ wherein the olefin mixture ~~which~~ comprises from 30 to
80% by weight of linear hexene isomers and ~~overall~~ at least 60% by weight of hexene
isomers overall, and
wherein the dimerization is carried out with heterogeneous catalysis.

Claim 2 (Currently Amended): A The process as claimed in claim 1, wherein the
olefin mixture comprises a hexene isomer mixture ~~is used which comprises~~ comprising dimer
propene and linear hexenes in a weight ratio of from 0.3:1 to 1:0.1.

Claim 3 (Canceled)

Claim 4 (Currently Amended): A The process as claimed in claim 1, wherein
dimerizing is carried out with a dimerization catalyst ~~is used which comprises~~ comprising at
least one element of subgroup VIII of the Periodic Table and the ~~catalyst composition and the~~
~~reaction conditions are chosen such that a dimer mixture is obtained which~~ dimerized product

comprises less than 10% by weight of compounds which have a structural element of ~~the~~
formula I (~~vinylidene group~~)



in which A¹ and A² are aliphatic hydrocarbon radicals.

Claim 5 (Currently Amended): An olefin mixture ~~preparable~~ prepared by ~~process-step~~
~~a) of the process of dimerizing as claimed in claim 1.~~

Claim 6 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 5, which
comprises a proportion of branched components greater than 85%, and an unbranched olefin
proportion below 15%.

Claim 7 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 5, wherein
~~predominantly~~ groups having (y-4) and (y-5) carbon atoms are bonded to the branching sites
of the main chain of the dimerized product, where y is the number of carbon atoms in one or
monomers present in the olefin mixture ~~the dimerized monomer~~.

Claim 8 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 5, wherein
the branched components of the ~~dimerization mixture~~ dimerized product have one or two
branches on adjacent carbon atoms in the region of 1/4 to 3/4 of the chain length of the main
chain, ~~have a branch, or two branches on adjacent carbon atoms.~~

Claim 9 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 5, wherein ~~predominantly~~ groups having one or two carbon atoms are bonded to the branching sites of the main chain of the dimerized product.

Claim 10 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 5, wherein, ~~in the case of the~~ branched dimerized products have a components, the ratio of aliphatic to olefinic hydrogen atoms is ~~in the range~~ $H_{\text{aliph}}:H_{\text{olefin}}$ of from ~~[[=]]~~ 47:1 to 11:1.

Claim 11 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 5, wherein, ~~in the case of the~~ the branched dimerized products have a components, the ratio of aliphatic to olefinic hydrogen atoms is ~~in the range~~ $H_{\text{aliph}}:H_{\text{olefin}}$ of from ~~[[=]]~~ 23:1 to 14:1.

Claim 12 (Currently Amended): A surfactant alcohol ~~or alkoxylation products thereof, preparable~~ prepared by the process steps a), b) and optionally c) of the process of claim 1.

Claim 13 (Currently Amended): ~~A~~ The surfactant alcohol ~~or alkoxylation products thereof~~ as claimed in claim 12, which has a degree of branching between 2.0 and 3.0.

Claims 14-18 (Cancelled).

Claim 19 (Currently Amended): ~~An~~ The olefin mixture as claimed in claim 8, wherein the branched components of the ~~dimerization mixture~~ dimerized product have one or

two branches on adjacent carbon atoms, in the region of 1/3 to 2/3 of the chain length of the main chain, ~~have a branch, or two branches on adjacent carbon atoms.~~

Claim 20 (Currently Amended): The olefin mixture claimed in claim 6 wherein the dimerized product comprises greater than 90% by weight of branched olefins ~~comprise a proportion greater than 90%.~~

Claim 21 (Currently Amended): The olefin mixture claimed in claim 6 wherein the dimerized product comprises less than 10% by weight of the unbranched olefins ~~comprise a proportion less than 10%.~~

Claim 22 (Currently Amended): A nonionic surfactant comprising the ~~surfactant alcohol~~ alkoxylation product of claim ~~12~~ 28.

Claim 23 (Currently Amended): A method for the preparation of a surfactant comprising
chemically modifying the surfactant alcohol ~~or alkoxylation product thereof~~ of claim 12.

Claim 24 (Currently Amended): A method for the preparation of alkanol glycoside and polyglycoside mixtures comprising
singly or multiply reacting single or multiple reaction (glycosidation, polyglycosidation) of the surfactant alcohols of claim 12 with mono-, di- or polysaccharides ~~with the exclusion~~ in the absence of water and with acid catalysis or with O-acetylsaccharide halides.

Claim 25 (Currently Amended): A method for the preparation of surface-active sulfates comprising ~~esterification of~~ esterifying the surfactant alcohols and alkoxylation products ~~thereof~~ of claim 12 ~~28~~ with sulfuric acid or sulfuric acid derivatives to give acidic alkyl sulfates or alkyl ether sulfates.

Claim 26 (Currently Amended): A method for the preparation of surface-active phosphates comprising
~~esterification of~~ esterifying the surfactant alcohols ~~and alkoxylation products thereof~~ of claim 12 with phosphoric acid or ~~it's~~ a derivative thereof ~~derivatives~~ to give an acidic alkyl ~~phosphate phosphates~~ or an alkyl ether ~~phosphate phosphates~~.

Claim 27 (New): The process as claimed in Claim 1, wherein the degree of branching of the dimerized olefin mixture is from 2.0 to 3.0.

Claim 28 (New): The process as claimed in Claim 1, further comprising alkoxylation of the primary alcohols.

Claim 29 (New): An alkoxylation product prepared by the process as claimed in Claim 28.

Claim 30 (New): The alkoxylation product of Claim 28 which has a degree of branching between 2.0 and 3.0.

Claim 31 (New): A method for the preparation of a surfactant, comprising

chemically modifying the alkoxylation product of Claim 28.